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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jan Schultink

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT

PAPER NUMBER

1776

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,225	SCHULTINK, JAN	
	Examiner	Art Unit	
	MINH-CHAU PHAM	1776	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-18,20-24 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-18,20-24 and 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-9 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fesco (3,738,091), in view of Zhang (6,156,086), and further in view of Freudenberg (6,045,595).

Fesco discloses a filter bag (20) for a vacuum cleaner comprising a substantially tubular bag having a closed free on end (28) and at least partially closed area opposite the closed free end area (28) (see Figs. 1-4, col. 3, lines 1-9), and a retaining plate (30) wherein edges of the bag (20) are at least partially interconnected (26) by a weld seam to form the at least partially closed area (see Figs. 1, 5 & 8, col. 3, lines 1-18, lines 9-18, lines 23-36, lines 46-51 and line 60 through col. 4, line 18). Fesco further discloses the seam in the bottom of bag extends over an entire width of the bottom (28, see Fig. 3). Fesco also discloses the filter bag having pre-creases being introduced into the bag material with seam in the bottom (68 in Fig. 6) and up to the closed free end area (see 74, 76, 80 in Fig. 6). Fesco also discloses the retaining plate (30) having a through hole (see Figs. 1 & 5). Fesco further discloses a method of manufacturing a filter bag (20) for a vacuum cleaner comprising the steps of providing a substantially tubular bag having a closed free on end (28) and at least partially closed area opposite the closed free end area (28) (see Figs. 1-4, col. 3, lines 1-9), and a retaining plate (30) wherein

Art Unit: 1776

edges of the bag (20) are at least partially interconnected (26) by a weld seam to form the at least partially closed area (see Figs. 1, 5 & 8, col. 3, lines 1-18, lines 9-18, lines 23-36, lines 46-51 and line 60 through col. 4, line 18). Fesco further discloses the step of connecting plies in the bottom as a result of folding the seam in the bottom of bag extending over an entire width of the bottom (28, see Fig. 3). Fesco also discloses the filter bag having pre-creases being introduced into the bag material with seam in the bottom (68 in Fig. 6) and up to the closed free end area (see 74, 76, 80 in Fig. 6).

Fesco also discloses the retaining plate (30) having a through hole (see Figs. 1 & 5).

Claims 1, 2, 4-9 and 11-18 differ from the disclosure of Fesco in that the filter bag made of a bag material having at least one non-woven composite layer having a weld seam, and the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas in which plies of the bag material lie one above the other. Zhang discloses a dual media vacuum cleaner bag including at least two sidewalls which sidewalls are joined by thermal seams (see Abstract). Zhang further discloses the bag is made by a composite filter material laminate (21) usable to form a second panel or sidewall of the vacuum cleaner bag. The inner non-woven filter layer (23) is comprised of a non-woven web, and the non-woven filter layer (23) can be a melt blown microfiber non-woven web (col. 2, line 59 through col. 3, line 3, col. 3, lines 11-12). Zhang also discloses the edges of the bag are interconnected by a weld seam via ultrasonic welding or heat bonding (see col. 7, lines 59-67, col. 8, lines 18-22).

Freudenberg discloses a dust filter bag (12) made of a composite polymer fiber layers wherein the bottom of the bag being formed by at least partially interconnecting plies of

Art Unit: 1776

the bag material at least in the areas (see 9 in Fig. 3) in which plies of the bag material lie one above the other (see details of Fig. 3). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the vacuum bag material of Fesco by the composite bag material as taught by Zhang with a weld seam and with the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas in which plies of the bag material lie one above the other as taught by Freudenberg since it is well known in the art that the vacuum cleaner bag made from the composite laminate material with the interconnected plies would provide a filter media having high capture efficiency for fine particles with a relatively low pressure drop, hence, a desire for high levels of filtration performance coupled with good mechanical performance at lower costs.

Claims 20-24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fesco (3,738,091), in view of Zhang (6,156,086), and further in view of Freudenberg (6,045,595).as applied supra, and further in view of Terzuoli (3,333,523).

Fesco discloses a method of manufacturing a filter bag (20) for a vacuum cleaner comprising the steps of providing a substantially tubular bag having a closed free on end (28) and at least partially closed area opposite the closed free end area (28) (see Figs. 1-4, col. 3, lines 1-9), and a retaining plate (30) wherein edges of the bag (20) are at least partially interconnected (26) by a weld seam to form the at least partially closed area (see Figs. 1, 5 & 8, col. 3, lines 1-18, lines 9-18, lines 23-36, lines 46-51 and line 60 through col. 4, line 18). Fesco further discloses the step of connecting plies in the

Art Unit: 1776

bottom as a result of folding the seam in the bottom of bag extending over an entire width of the bottom (28, see Fig. 3). Fesco also discloses the filter bag having pre-creases being introduced into the bag material with seam in the bottom (68 in Fig. 6) and up to the closed free end area (see 74, 76, 80 in Fig. 6). Fesco also discloses the retaining plate (30) having a through hole (see Figs. 1 & 5). Zhang discloses a dual media vacuum cleaner bag including at least two sidewalls which sidewalls are joined by thermal seams (see Abstract). Zhang further discloses the bag is made by a composite filter material laminate (21) usable to form a second panel or sidewall of the vacuum cleaner bag. The inner non-woven filter layer (23) is comprised of a non-woven web, and the non-woven filter layer (23) can be a melt blown microfiber non-woven web (col. 2, line 59 through col. 3, line 3, col. 3, lines 11-12). Zhang also discloses the edges of the bag are interconnected by a weld seam via ultrasonic welding or heat bonding (see col. 7, lines 59-67, col. 8, lines 18-22). Freudenberg discloses a method of producing a dust filter bag (12) made of a composite polymer fiber layers wherein the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas (see 9 in Fig. 3) in which plies of the bag material lie one above the other (see details of Fig. 3). Claims 20-24 and 16-29 differ from the disclosure of Fesco, Zhang and Freudenberg in that the method comprises the step of introducing a die so that the bottom of the bag is produced by folding the bag over the die. Terzuoli discloses a method of producing a filter bag comprising the step of providing a die so that the bottom of the filter bag is folded over the die (see col. 1, lines 44-50, col. 2, lines 46-56, col. 4, lines 50-66, col. 5, lines 21-33 and lines 67-76, col. 6,

Art Unit: 1776

line 71 through col. 7, line 17, col. 8, lines 23-36). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to adopt the step of introducing a die to facilitate the folding of the filter bag as taught by Teruoli for the filter bag of Fesco, Zhang and Freudenberg since it is well known in the art that the method of joining the two edges along a welded seam provides excellent seam integrity and Zhang clearly indicates sealing seams.

Response to Amendment

Applicant's arguments filed on August 18, 2010 have been fully considered but they are not persuasive.

Applicant argues that the cited prior arts "Fesco and Zhang do not disclose the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas in which plies of the bag material lie one above the other, wherein the plies are interconnected by welding". The Examiner still maintains Fesco and Zhang as the primary and secondary references under the 103 (a) rejection of claims 1, 2, 4-9 and 11-18 to show:

Fesco discloses a filter bag (20) for a vacuum cleaner comprising a substantially tubular bag having a closed free on end (28) and at least partially closed area opposite the closed free end area (28) (see Figs. 1-4, col. 3, lines 1-9), and a retaining plate (30) wherein edges of the bag (20) are at least partially interconnected (26) by a weld seam to form the at least partially closed area (see Figs. 1, 5 & 8, col. 3, lines 1-18, lines 9-18, lines 23-36, lines 46-51 and line 60 through col. 4, line 18), as claimed. Fesco further discloses the seam in the bottom of bag extends over an entire width of the bottom (28,

Art Unit: 1776

see Fig. 3), as claimed. Fesco also discloses the filter bag having pre-creases being introduced into the bag material with seam in the bottom (68 in Fig. 6) and up to the closed free end area (see 74, 76, 80 in Fig. 6), as claimed. Fesco also discloses the retaining plate (30) having a through hole (see Figs. 1 & 5), as claimed. Fesco further discloses a method of manufacturing a filter bag (20) for a vacuum cleaner comprising the steps of providing a substantially tubular bag having a closed free on end (28) and at least partially closed area opposite the closed free end area (28) (see Figs. 1-4, col. 3, lines 1-9), and a retaining plate (30) wherein edges of the bag (20) are at least partially interconnected (26) by a weld seam to form the at least partially closed area (see Figs. 1, 5 & 8, col. 3, lines 1-18, lines 9-18, lines 23-36, lines 46-51 and line 60 through col. 4, line 18), as claimed. Fesco further discloses the step of connecting plies in the bottom as a result of folding the seam in the bottom of bag extending over an entire width of the bottom (28, see Fig. 3), as claimed. Fesco also discloses the filter bag having pre-creases being introduced into the bag material with seam in the bottom (68 in Fig. 6) and up to the closed free end area (see 74, 76, 80 in Fig. 6), as claimed. Fesco also discloses the retaining plate (30) having a through hole (see Figs. 1 & 5), as claimed.

Zhang discloses a dual media vacuum cleaner bag including at least two sidewalls which sidewalls are joined by thermal seams (see Abstract), as claimed. Zhang further discloses the bag is made by a composite filter material laminate (21) usable to form a second panel or sidewall of the vacuum cleaner bag, as claimed. The inner non-woven filter layer (23) is comprised of a non-woven web, and the non-woven

Art Unit: 1776

filter layer (23) can be a melt blown microfiber non-woven web (col. 2, line 59 through col. 3, line 3, col. 3, lines 11-12), as claimed. Zhang also discloses the edges of the bag are interconnected by a weld seam via ultrasonic welding or heat bonding (see col. 7, lines 59-67, col. 8, lines 18-22), as claimed.

The Examiner newly introduces Freudenberg (6,045,595) as the tertiary reference in combination with Fesco and Zhang under the 103(a) rejection of claims 1, 2, 4-9 and 11-18 to show:

Freudenberg discloses a dust filter bag (12) made of a composite polymer fiber layers wherein the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas (see 9 in Fig. 3) in which plies of the bag material lie one above the other (see details of Fig. 3), as claimed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute the vacuum bag material of Fesco by the composite bag material as taught by Zhang with a weld seam and with the bottom of the bag being formed by at least partially interconnecting plies of the bag material at least in the areas in which plies of the bag material lie one above the other as taught by Freudenberg since it is well known in the art that the vacuum cleaner bag made from the composite laminate material with the interconnected plies would provide a filter media having high capture efficiency for fine particles with a relatively low pressure drop, hence, a desire for high levels of filtration performance coupled with good mechanical performance at lower costs.

Applicant also argues that the cited "Hall reference does not disclose the step introducing a die so that the bottom of the bag is folded over the die, as stated in claim 20". The Examiner now drops the Hall reference and newly introduces Terzuoli (3,333,523) as the tertiary reference in combination with Fesco, Zhang and Freudenberg under the 103(a) rejection of claims 20-24 and 26-29 to show:

Terzuoli discloses a method of producing a filter bag comprising the step of providing a die so that the bottom of the filter bag is folded over the die (see col. 1, lines 44-50, col. 2, lines 46-56, col. 4, lines 50-66, col. 5, lines 21-33 and lines 67-76, col. 6, line 71 through col. 7, line 17, col. 8, lines 23-36), as claimed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to adopt the step of introducing a die to facilitate the folding of the filter bag as taught by Teruoli for the filter bag of Fesco, Zhang and Freudenberg since it is well known in the art that the method of joining the two edges along a welded seam provides excellent seam integrity and Zhang clearly indicates sealing seams.

Applicant's arguments with respect to claims 1, 2, 4-9, 11-18, 20-24 and 26-29 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU PHAM whose telephone number is (571)272-1163. The examiner can normally be reached on M-F.

Art Unit: 1776

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272 - 1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MINH-CHAU PHAM/
Examiner, Art Unit 1776
March 1, 2011